In the claims:

Please cancel claims 1, 4, 5, 12-18, 21, 22 and 29-31.

Claim 1 (canceled herein)

Claims 2-3 (previously canceled)

Claim 4 (canceled herein)

Claim 5 (canceled herein)

Claims 6-7 (previously canceled)

Claim 8 (original): A method for determining packet processing data, comprising the steps of:

inputting a first lookup key including a first portion of a tuple;

determining a nickname in response to the first lookup key, the nickname having a lower bit count than the first lookup key;

outputting the nickname;

inputting a second lookup key including a second portion of the tuple and the nickname; and

outputting packet processing data in response to the second lookup key.

Claim 9 (original): The method according to claim 8, wherein the ones of outputting steps further include outputting respective ones of recursion indicators sufficient to indicate the need for inputting an additional lookup key.

Claim 10 (original): The method according to claim 8, wherein the ones of outputting steps further include outputting ones of indicators, respectively, sufficient to indicate the absence and presence, respectively, of packet processing data.

Claim 11 (original): The method according to claim 8, wherein the ones of outputting steps further include outputting ones of indicators, respectively, sufficient to indicate the presence and absence, respectively, of a nickname.

Claim 12 (canceled herein)

Claim 13 (canceled herein)

Claim 14 (canceled herein)

Claim 15 (canceled herein)

Claim 16 (canceled herein)

Claim 17 (canceled herein)

Claim 18 (canceled herein)

Claims 19-20 (previously canceled)

Claim 21 (canceled herein)

Claim 22 (canceled herein)

Claims 23-24 (previously canceled)

Claim 25 (original): A switching interface for a data communication switch, comprising:

means for inputting a first lookup key including a first portion of a tuple;

means for determining a nickname in response to the first lookup key, the nickname having a lower bit count than the first lookup key;

means for outputting the nickname;

means for inputting a second lookup key including a second portion of the tuple and the nickname; and

means for outputting packet processing data in response to the second lookup key.

Claim 26 (original): The switching interface according to claim 25, further comprising means for outputting respective ones of recursion indicators sufficient to indicate a need for inputting an additional lookup key.

Claim 27 (original): The switching interface according to claim 25, further comprising means for outputting ones of indicators, respectively, sufficient to indicate the absence and presence, respectively, of packet processing data.

Claim 28 (original): The switching interface according to claim 25, further comprising means for outputting ones of indicators, respectively, sufficient to indicate the presence and absence, respectively, of a nickname.

Claim 29 (canceled herein)

Claim 30 (canceled herein)

Claim 31 (canceled herein)